



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,662	02/23/2004	John F. Conley JR.	SLA0674	2287

27518 7590 09/20/2005

DAVID C RIPMA, PATENT COUNSEL
SHARP LABORATORIES OF AMERICA
5750 NW PACIFIC RIM BLVD
CAMAS, WA 98607

EXAMINER

WOJCIECHOWICZ, EDWARD JOSEPH

ART UNIT PAPER NUMBER

2815

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Huotari (2004/0106249). The reference to Huotari teaches the inventive process where a very thin barrier layer is formed between a gate dielectric layer and a gate electrode such that the work function of the gate is determined solely by the material of the gate electrode. Specifically, Huotari teaches that the barrier layer may be formed with a thickness of less than 5 nm as claimed. See the discussion at [0036].

In addition, Huotari also teaches using the claimed materials for the barrier layer and the gate electrode. See the discussion at [0020] and [0030].


It is noted that the Huotari reference has an effective filing date of Dec. 3, 2002 based on provisional application 60/430,960. A review of this provisional application shows that the inventive concept of using a barrier layer less than 5 nm in thickness was also disclosed in the provisional application, where Huotari teaches that the barrier layer may have a thickness as little as 1 molecular layer (page 3). In addition, the provisional application teaches that the barrier layer may be thinner than the gate dielectric layer, which, in turn, is disclosed as 3-5 nm in thickness (page 7).

Art Unit: 2815

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Wojciechowicz whose telephone number is (571) 272-1739. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Edward Wojciechowicz
Primary Examiner
Art Unit 2815

EW: ew